

WHAT IS CLAIMED IS

5

1. A communication method comprising the steps  
of:

- 10 a) transmitting an ACK signal indicating that a  
received packet includes no error or a NACK signal  
indicating that the received packet includes error from a  
reception end to a transmission end, and performing  
automatic repeat request;
- 15 b) obtaining reliability of the received packet  
when demodulating it at the reception end; and
- c) reporting from the reception end to the  
transmission end the reliability of the received packet,  
utilizing the ACK/NACK signal by using not less than three  
levels.

20

2. The method as claimed in claim 1, further  
comprising the step of d) determining based on the  
25 reliability of the received packet whether or not the  
received packet is to be stored so as to be combined with  
a re-transmission packet, when the received packet  
includes error.

30

3. The method as claimed in claim 1, further

09885408 "063101  
T07290" 8048860

comprising the step of d) performing control of a transmission parameter at the transmission end based on the ACK/NACK signal transmitted from the reception end.

5

4. A communication method in a mobile communication system performing power control at a transmission end so that reception quality at a reception end may be kept constant, comprising the steps of:

a) transmitting an ACK signal indicating that a received packet includes no error or a NACK signal indicating that the received packet includes error from a reception end to a transmission end, and performing automatic repeat request; and

b) performing control of a transmission parameter at the transmission end utilizing the ACK/NACK signal and a transmission power control signal.

20

5. The method as claimed in claim 4, further comprising the step of c) re-transmitting a re-transmission packet re-built so as to be able to be properly combined with an already transmitted packet at the reception end, when an information transmission rate for transmission from the transmission end is changed through the transmission parameter control at the transmission end.

25

30

09385408 062101  
"04290" 80458660



reception end, when the mobile station receives the ACK/NACK signals from the plurality of base stations which include not less than  $n$  ( $\geq 1$ ) ACK signals.

5

9. A communication method in a mobile communication system, comprising the steps of:

10 a) transmitting an ACK signal indicating that a received packet includes no error or a NACK signal indicating that the received packet includes error, from a reception end to a transmission end, and performing automatic repeat request; and

15 b) when uplink site diversity reception is performed such that a plurality of base stations simultaneously receive a signal transmitted from a mobile station, generating the ACK/NACK signal at a host station of the plurality of base stations, and, transmitting from  
20 the plurality of base stations the same ACK/NACK signals generated by the host station to the mobile station.

25

10. A communication method in a mobile communication system, comprising the steps of:

a) transmitting an ACK signal indicating that a received packet includes no error or a NACK signal  
30 indicating that the received packet includes error, from a reception end to a transmission end, and performing automatic repeat request; and

b) when downlink site diversity reception is

0933408 062101  
TOT290 8043360

performed such that signals transmitted from a plurality of base stations are simultaneously received by a mobile station, demodulating a received packet at the mobile station, generating the ACK/NACK signal, and transmitting it; and

c) when a host station of the plurality of base stations receives the ACK/NACK signals via the plurality of base stations which include not less than  $n$  ( $\geq 1$ ) ACK signals, determining that the plurality of base stations performed proper reception, then re-transmission control being performed at the plurality of base stations.

11. A base station using an ACK/NACK signal and performing automatic repeat request, wherein said base station participates uplink site diversity such that a plurality of base stations simultaneously receive a signal transmitted from a mobile station, said base station comprising:

a part generating the ACK/NACK signal and transmitting it to the mobile station and to a host station; and

a part receiving the common ACK/NACK signal from the host station of the plurality of base stations.

12. A base station using an ACK/NACK signal and performing automatic repeat request, wherein said base station participates uplink site diversity such that a

plurality of base stations simultaneously receive a signal transmitted from a mobile station, said base station comprising:

5 a part transferring a received packet to the host station of the plurality of base stations; and

a part receiving the common ACK/NACK signal from the host station of the plurality of base stations, and transferring it.

10

13. A base station receiving an ACK/NACK signal and performing re-transmission control, said base station participating downlink site diversity such that the ACK/NACK signal transmitted from a mobile station is received by a plurality of base stations simultaneously, said base station comprising:

20 a part transferring the received ACK/NACK signal to a host station of the plurality of base stations; and

a part receiving a signal concerning the ACK/NACK signal from the host station of the plurality of base stations, and performing re-transmission control.

09885408 062101  
101290 8045860